APPLICATIONS ARCHITECTURE INFORMATION BRIEF

November 2003

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Douglas Omaha Technology Commission

OVERVIEW

- Deloitte & Touche Recommendations
- Architecture Strategy
- DOT.Comm Architecture
- Existing and Future Environments
- Summary

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Deloitte & Touche Architecture Strategy Recommendations

- Pursue Packaged Software Solutions

- Establish Software Selection Methodology

- Provide Secure Information Access

- Pursue Open Architecture

- Utilize Compatible Technologies

- Dependent upon Functional Requirements

Source: Strategic Information Systems Plan, Deloitte & Touche, September 12, 2000

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3

ARCHITECTURE STRATEGY

- Model after the Federal Enterprise Architecture (FEA) and Leading Software Providers (Microsoft and Oracle)
- http://www.feapmo.gov/fea.asp

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Federal Enterprise Architecture (FEA)

Components

Functions

Service Layers

Service Access and Delivery

Access Channels
Web Browser
Wireless / PDA Device
Collaboration / Communication
Other Electronic Channels

Delivery Channels
Internet, Intranet
Extranet
Peer to Peer (P2P)
Virtual Private Network (VPN)

Service Requirements
Legislative / Compliance
Authentication / Single Sign-On
Hosting

Service Transport
Network Services
Transport

Service Platform and Infrastructure

Support Platforms
Wireless / Mobile
Platform Independent (J2EE)
Platform Dependent (.NET)

Database / Storage
Database
Storage Devices

Delivery Servers
Web, Media
Application
Portal

Software Engineering
Integrated Development Environment (IDE)
Software Configuration Management (SCM)
Testing Management, Modeling

Hardware / Infrastructure
Servers / Computers
Embedded Technology Devices
Peripherals
WAN, LAN
Network Devices / Standards
Video Conferencing

Component Framework

Security
Certificates / Digital Signature
Supporting Security Services

Data Interchange
Data Exchange

Presentation / Interface
Static Display
Dynamic Server-Side Display
Content Rendering
Wireless / Mobile / Voice

Business Logic
Platform Independent
Platform Dependent

Data Management
Database Connectivity
Reporting and Analysis

Service Interface and Integration

Integration
Middleware
Database Access
Transaction Processing
Object Request Broker

Interoperability
Data Format / Classification
Data Types / Validation
Data Transformation

Interface
Service Discovery
Service Description / Interface

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5

APPLICATIONS ARCHITECTURE LAYERS, FUNCTIONS & COMPONENTS

USERS	Internet	Intranet	Extranet
	Resident Visitor	Business	Employee
ACCESS	3270 Internet Explorer	Web Browser Terminal Emulation	5250 Netscape
APPLICATIONS	Business Rules Based Data Creation		
	JAVA .Net HTML XML COBOL SQL		
DATA	Business Rules Based Data Storage		
	Enterprise Relational Database Management System & Spatial Data		
SYSTEMS	Integration	Interoperability	Interfaces
	Data Storage Systems	Applications	Data Feeds

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APPLICATION INDEPENDENT PLATFORM (AIP)

USERS

WebSphere Portal Enable

ACCESS

WebSphere Portal Enable

APPLICATIONS

WebSphere Studio & WebSphere Application Server

DATA

DB2

SYSTEMS

UNIX

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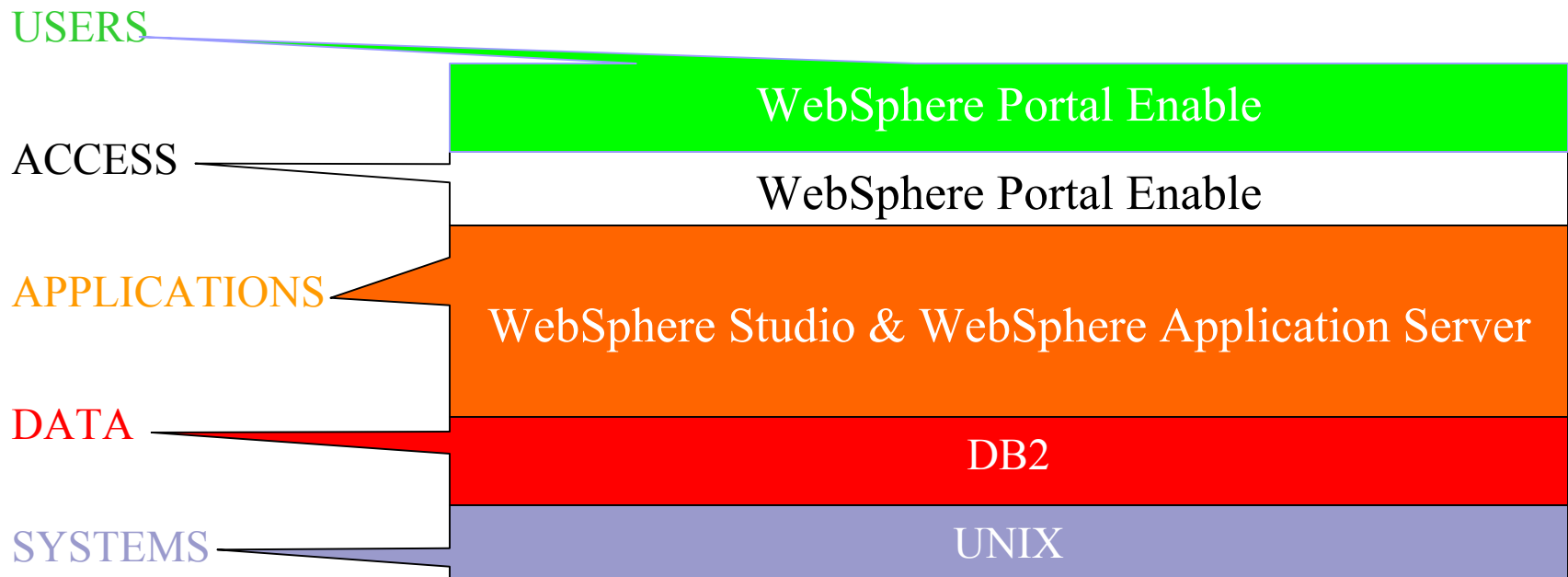
ENTERPRISE APPLICATION ARCHITECTURES

Oracle	DOT.Comm	Microsoft
USERS	USERS	USER INTERFACE
PRESENTATION	ACCESS	BUSINESS LAYER
APPLICATIONS	APPLICATIONS	DATA STORAGE
INTEGRATION/WEB SERVICES	DATA	
LEGACY SYSTEMS	SYSTEMS	

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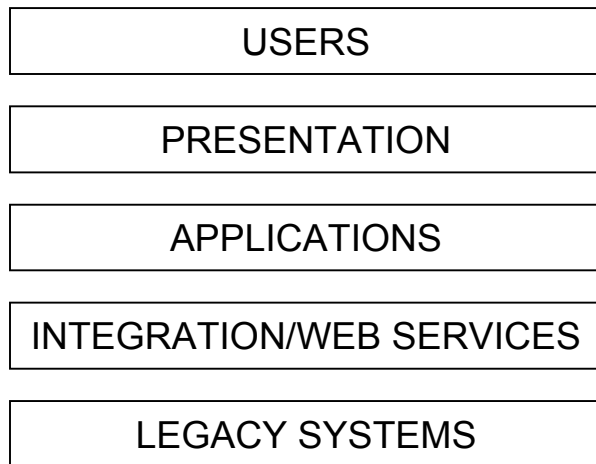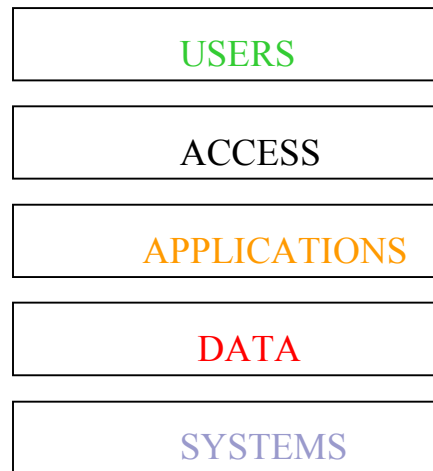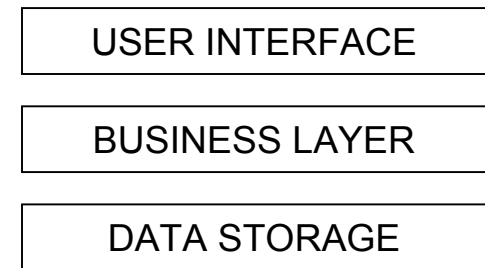
Existing Environment

Future Environment

Web App Server

Host Access

Portal

Browser

Legacy Systems
(AS-400 & 390)

Interface Integration

Process & Data Integration

App Server

DB

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10
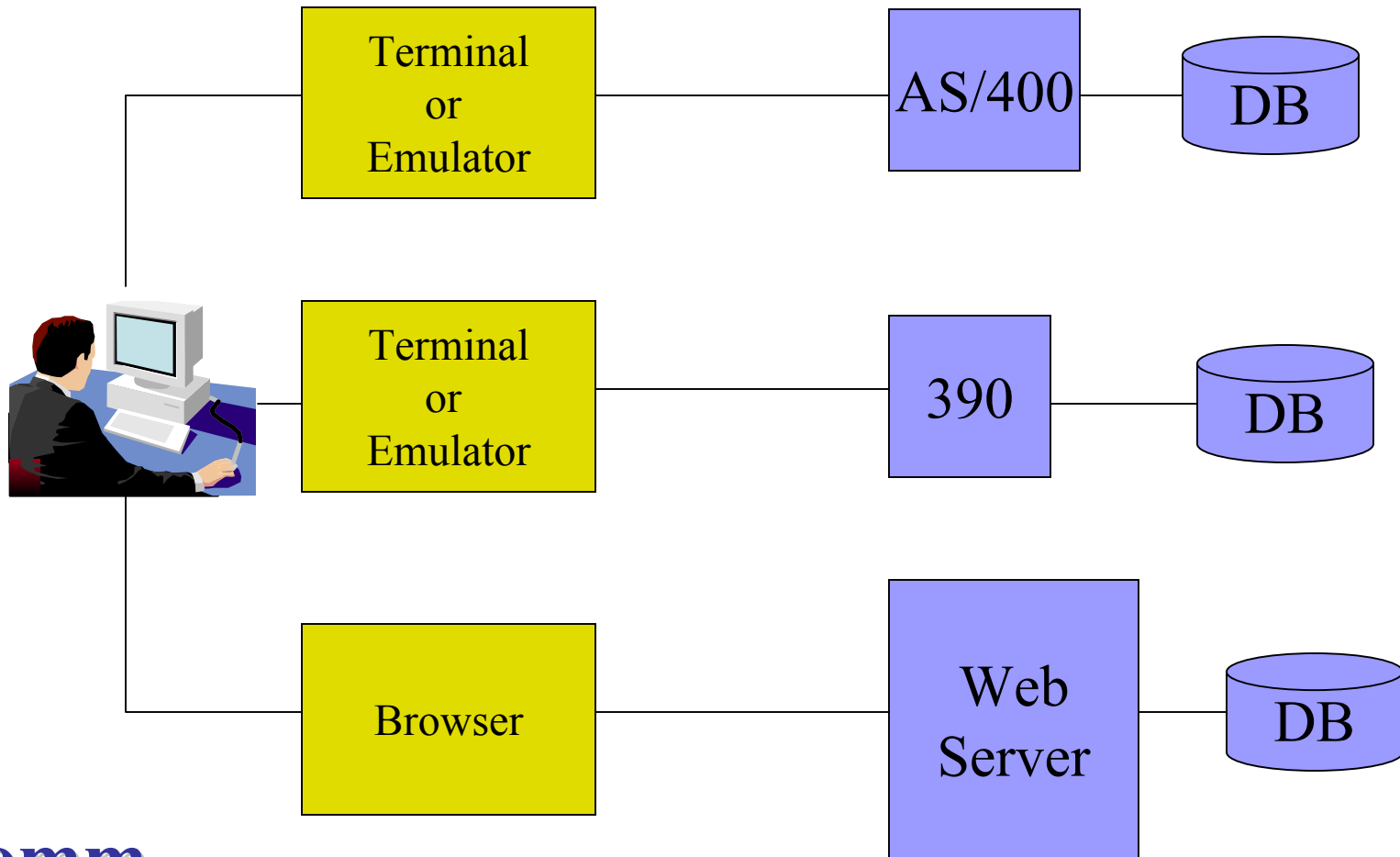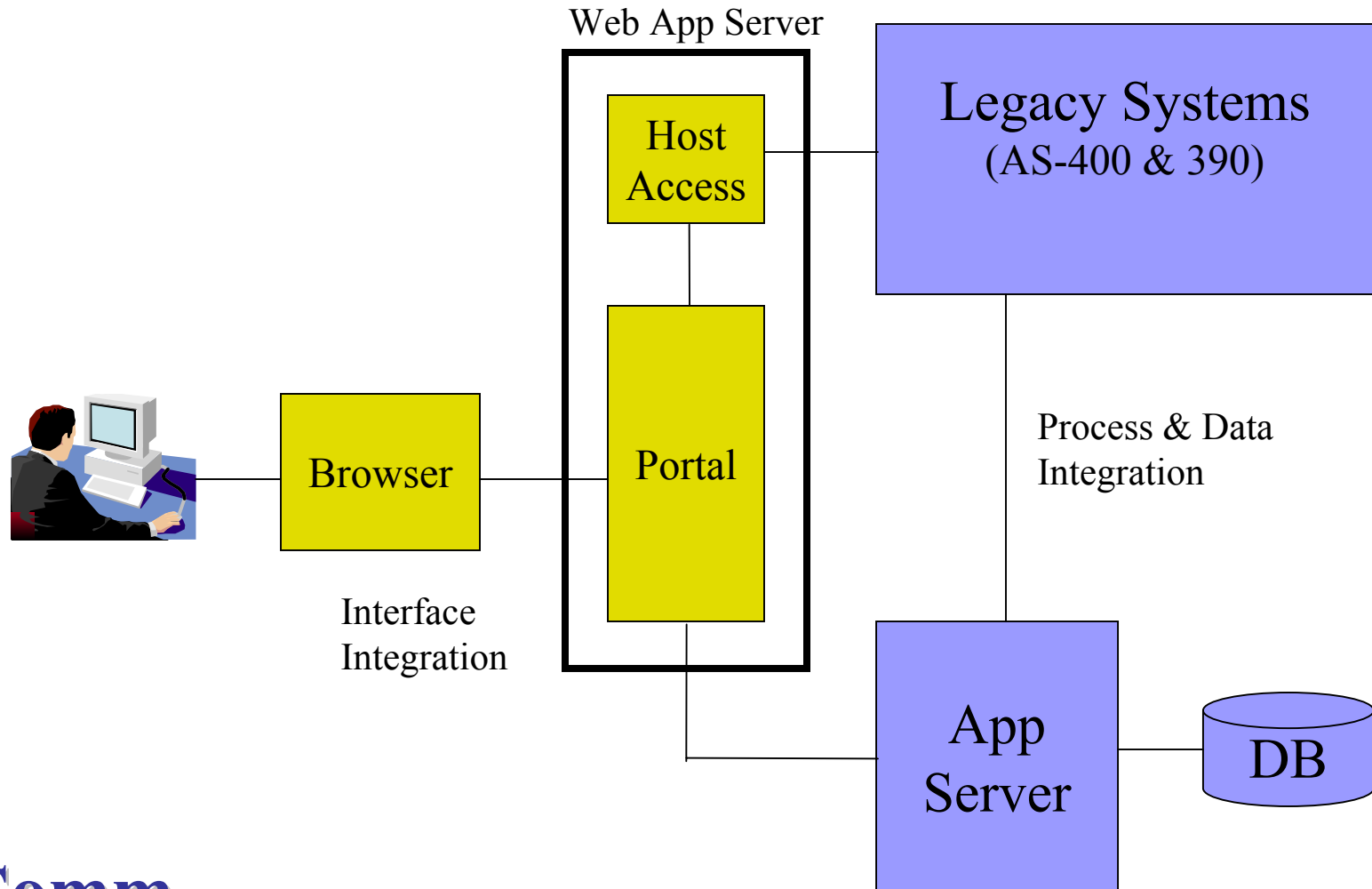
SUMMARY

- Exploits COTS Products

- Cost Effective

- Provides Ease of Access to Data

- Meets the Needs of the Government Business Units and Citizens

- Multi-Lingual Support

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